

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- NSPS SOURCE
RENEWAL

PERMITTEE

Rockford Blacktop Construction Company
Attn: Mr. M. W. Rafferty, President
5920 Nimtz Road
Loves Park, Illinois 61111

Application No.: 72110037

I.D. No.: 201803ABE

Applicant's Designation:

Date Received: January 3, 2006

Subject: Asphalt Plants and RAP Plant

Date Issued:

Expiration Date:

Location: 5290 Nimtz Road, Loves Park

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of natural gas fired drum-mix asphalt plant and natural gas fired batch plant equipped with a common baghouse and dryer, 3 Asphalt Storage Tanks (30,000-gallon, each), 3 miscellaneous asphalt storage tanks (6,000-gallon, 2,000-gallon, and 15,000-gallon), a liquid asphalt storage tanks (10,000 gallon), one anti-strip additive (2,000 gallon) storage tank, and one RAP processing plant comprised of two crushers, two screens, and three conveyors as described in the application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions from the asphalt plant to less than major source thresholds (i.e., less than 100 tons/year of carbon monoxide (CO)). As a result, the source is excluded from requirements to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
- 2a. These asphalt plants are subject to New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and I. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
- b. The emissions from the asphalt plants shall not contain particulate matter in excess of 0.04 gr/dscf and shall not exhibit 20% opacity or greater, pursuant to the NSPS, 40 CFR 60.92.

- c. At all times the Permittee shall also maintain and operate the Asphalt Plants, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to the NSPS, 40 CFR 60.11(d).
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- 3a. The 3 conveyors, 2 crushers, and 2 screens are subject to New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and OOO. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
 - b. Emissions of particulate matter from grinding mills, screens (except from truck dumping), bucket elevators, transfer points on belt conveyors, bagging operations, and storage bins, shall not exceed 10 percent opacity, [40 CFR 60.672(b) and (d)].
 - c. Emissions of particulate matter from the crushers (except from truck dumping), shall not exceed 15 percent opacity, [40 CFR 60.672(c) and (d)].
 - d. At all times the Permittee shall also maintain and operate this equipment, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to the NSPS, 40 CFR 60.11(d)..
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- 5a. Pursuant to 35 Ill. Adm. Code 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 Ill. Adm. Code 212.122, except as allowed by 35 Ill. Adm. Code 212.123(b) and 212.124.
 - b. Pursuant to 35 Ill. Adm. Code 212.301 and 212.314, no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour).
 - c. Pursuant to 35 Ill. Adm. Code 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 Ill. Adm. Code 212.321.
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- 6. Pursuant to 35 Ill. Adm. Code 215.301, no person shall cause or allow the discharge of more than 8.0 lbs/hr of organic material into the atmosphere from any emission unit. If no odor nuisance exists then this limitation shall only apply to photochemically reactive material as defined in 35 Ill. Adm. Code 211.4690.

- 7a. The baghouses shall be in operation at all times when the associated drum dryers are in operation and emitting air contaminants.
- b. The Permittee shall follow good operating practices for the baghouses, including periodic inspection, routine maintenance and prompt repair of defects.
- c. The surface moisture content of the aggregate as to be processed in the crushed crushing plant associated with the asphalt plant shall be at least 1.5% by weight. The Permittee shall show compliance with this requirement as follows:
 - i. Water sprays shall be used on the emission units associated with the crushing plant (e.g., crushers, conveyors, and stockpiles, etc.) as necessary, except when weather conditions are below or expected to fall below freezing temperatures, to produce a moisture content of 1.5% by weight or higher to reduce particulate matter emissions; or
 - ii. Demonstrate compliance with Condition 7(c) by following the testing requirements of Condition 11(c).
- 8a. The drum mixer and drum dryer shall only be operated with natural gas as the fuel. The use of any other fuel in the drum mixer and drum dryer requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
- b. Boilers and tank heaters associated with the asphalt plants shall only be operated with natural gas as the fuel.
9. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the nuisance.
- 10a. Emissions and operation of drum mix asphalt plant shall not exceed the following limits:

<u>Equipment</u>	<u>Throughput</u>		<u>Pollutant</u>	<u>Emission</u>	<u>Emissions</u>	
	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>		<u>Factor</u>	<u>(lb/Mo)</u>	<u>(Tons/Yr)</u>
Natural Gas-Fired Drum-Mix Asphalt	60,000	650,000	PM	0.033	1,920	10.72
			CO	0.13	7,800	42.25
			NO _x	0.026	1,560	8.45
			SO ₂	0.0034	204	1.10
			VOM	0.032	1,920	10.40
			Totals			72.92

These limits are based on standard AP-42 emission factors, the PM emission factor is based on the most recent NSPS testing, the use of

natural gas as the only fuel fired in the dryer, and a maximum hourly capacity of 464 tons based on NSPS testing.

- b. Emissions and operation of batch mix asphalt plant shall not exceed the following limits:

<u>Equipment</u>	<u>Throughput</u>		<u>Pollutant</u>	<u>Emission Factor (lb/Ton)</u>	<u>Emissions</u>	
	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>			<u>(lb/Mo)</u>	<u>(Tons/Yr)</u>
Natural Gas-	5,000	20,000	PM	0.032	160	0.32
Fired Batch-			CO	0.40	2,000	4.00
Mix Asphalt			NO _x	0.025	125	0.25
			SO ₂	0.0046	23	0.05
			VOM	0.0082	41	0.08
			Totals			4.70

These limits are based on standard AP-42 emission factors, the PM emission factor is based on the most recent NSPS testing, the use of natural gas as the only fuel fired in the dryer, and a maximum hourly capacity of 300 tons.

- c. This permit is issued based on negligible emissions of volatile organic material (VOM) from the 8 storage tanks. For this purpose emissions from each emission source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
- d. Emissions and operation of RAP processing plant shall not exceed the following limits:

<u>Equipment</u>	<u>Total Throughput</u>		<u>Emission Factor (lb/Ton)</u>	<u>Emissions</u>	
	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>		<u>(lb/Mo)</u>	<u>(Tons/Yr)</u>
2 Crushers	40,000	180,000	0.0012	48	0.11
2 Screens	40,000	180,000	0.0022	88	0.20
3 Conveyors	60,000	270,000	0.00014	8.4	0.19
			Totals	144.4	0.50

These limits are based on standard controlled emission factors emission factors (with wet suppression or aggregate moisture content of 1.5% minimum) in Table 11.19.2-2 of AP-42 and a maximum hourly throughput of 400 tons.

- e. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 11a. Pursuant to 35 Ill. Adm. Code 212.107, 212.109, and 212.110, testing for particulate matter emissions shall be performed as follows:
- i. For both fugitive and nonfugitive particulate matter emissions, a determination as to the presence or absence of visible emissions from emission units shall be conducted in accordance with Method

22, 40 CFR part 60, Appendix A, incorporated by reference in 35 Ill. Adm. Code 212.113, except that the length of the observing period shall be at the discretion of the observer, but not less than one minute. This Condition shall not apply to 35 Ill. Adm. Code 212.301.

- ii. Except as otherwise provided in 35 Ill. Adm. Code Part 212, and except for the methods of data reduction when applied to 35 Ill. Adm. Code 212.122 and 212.123, measurements of opacity shall be conducted in accordance with Method 9, 40 CFR Part 60, Appendix A, and the procedures in 40 CFR 60.675(c) and (d), if applicable, incorporated by reference in 35 Ill. Adm. Code 212.113, except that for roadways and parking areas the number of readings required for each vehicle pass will be three taken at 5-second intervals. The first reading shall be at the point of maximum opacity and second and third readings shall be made at the same point, the observer standing at right angles to the plume at least 15 feet away from the plume and observing 4 feet above the surface of the roadway or parking area. After four vehicles have passed, the 12 readings will be averaged.
 - iii. Measurement of particulate matter emissions from stationary emission units subject to 35 Ill. Adm. Code Part 212 shall be conducted in accordance with 40 CFR part 60, Appendix A, Methods 5, 5A, 5D, or 5E.
 - iv. The volumetric flow rate and gas velocity shall be determined in accordance with 40 CFR part 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 3, and 4.
 - v. Upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
- b. Testing required by Condition 11(a) shall be performed by a qualified independent testing service.
 - c. The moisture content of a representative sample of the aggregate processed in the crushing plant associated with the asphalt plant shall be measured at least one per week using ASTM Procedures (C566-67) for total moisture content of material.
- 12a. The Permittee shall perform all applicable monitoring for the asphalt plants as specified in 40 CFR 60.13 and 60.674.
- b. Inspections of the asphalt plants and control systems equipment and operations shall be performed as necessary but at least once per week when the affected asphalt plants are in operation to confirm compliance

with the requirements of this permit.

- c. The water supply to the spray equipment shall be equipped with a metering device used to determine water usage for the control of particulate matter emissions.
 - d. Inspections of water spray equipment and operation (such as leaking, maintaining adequate flow, clogging of flow lines, etc.) shall be performed at least once per week when the crushing plant associated with the affected asphalt plant is in operation.
- 13a. The Permittee shall retain all applicable records for the asphalt plants as specified by 40 CFR 60.7 and 60.676.
- b. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
 - c. The Permittee shall maintain monthly records of the following items:
 - i. Records addressing use of good operating practices for the baghouses:
 - A. Operating logs for the asphalt plant dryer baghouses, including operating data (pressure drop or stack condition), daily upon startup;
 - B. Records for periodic inspection of the baghouses with date, individual performing the inspection, and nature of inspection; and
 - C. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
 - ii. Records addressing use of good operating practices for the crushing plant:
 - A. If the Permittee is relying on the requirements of Conditions 7(c)(ii) and 11(c) to demonstrate compliance with Condition 5(c), the Permittee shall maintain records of all moisture content tests performed including date, time, individual performing test, and location of sample (e.g., prior to crushing, stockpiles, etc.);
 - B. If the Permittee is relying on Condition 7(c)(i) to demonstrate compliance with Condition 7(c), the Permittee shall maintain operating logs for the water spray equipment, including dates and times of usage, malfunctions (type, date, and measures taken to correct), water pressure, and dates when there was at least 0.25" of rainfall during the preceding 24 hours and the water spray

equipment was not operated; and

- C. The Permittee shall maintain weekly records of water consumption in the spray equipment, as determined by the meter required by Condition 11(b) and the amount of precipitation specified in Condition 11(c).
- iii. Asphalt production for each plant (tons/month and tons/year);
- iv. Total natural gas usage (mmscf/month and mmscf/year);
- v. Aggregate throughput for the crushing plant (tons/month and tons/year); and
- vi. Monthly and Annual CO, NO_x, PM, SO₂, and VOM emissions from the asphalt plant shall be maintained, based on asphalt production, fuel consumption, and crushing plant throughput and the applicable emission factors, with supporting calculations.
- d. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA and USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to the Illinois EPA or USEPA request for records during the course of a source inspection.
- 14a. The Permittee shall submit all applicable reports for the asphalt plant as specified in 40 CFR 60.7, 60.19, and 60.676.
- b. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
- c. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA within 30 days after the exceedance. The report shall include the emissions released in accordance with the record keeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
- 15. Two (2) copies of required reports and notifications shall be sent to:
 - Illinois Environmental Protection Agency
 - Division of Air Pollution Control
 - Compliance Section (#40)
 - P.O. Box 19276
 - Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
5415 North University
Peoria, Illinois 61614

16. The assembly of any these plants at a new location will require a construction permit for the new location. This permit must be obtained prior to commencing construction at the new location.

If you have any questions on this, please call Dwayne Booker at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:DLB:psj

cc: Illinois EPA, FOS Region 2
USEPA

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the asphalt plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels, e.g., 100 tons per year of carbon monoxide at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled and control measures are more effective than required in this permit.

<u>Emissions Unit</u>	EMISSION (Tons/Year)				
	<u>PM</u>	<u>CO</u>	<u>NO_x</u>	<u>SO₂</u>	<u>VOM</u>
Natural Gas-Fired Drum-Mix Asphalt	10.72	42.25	8.45	1.10	10.40
Natural Gas-Fired Batch-Mix Asphalt	0.32	4.00	0.25	0.05	0.08
8 Storage Tanks					3.52
2 Crushers	0.50				
2 Screens	2.80				
3 Conveyors	0.40				
Totals:	14.74	46.25	8.70	1.15	14.00

DLB:psj